

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P1213790

Luminaire Tested: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213790
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33520)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WIDE FROSTED LENS
Light Source: -
Ballast/Driver: -

Summary

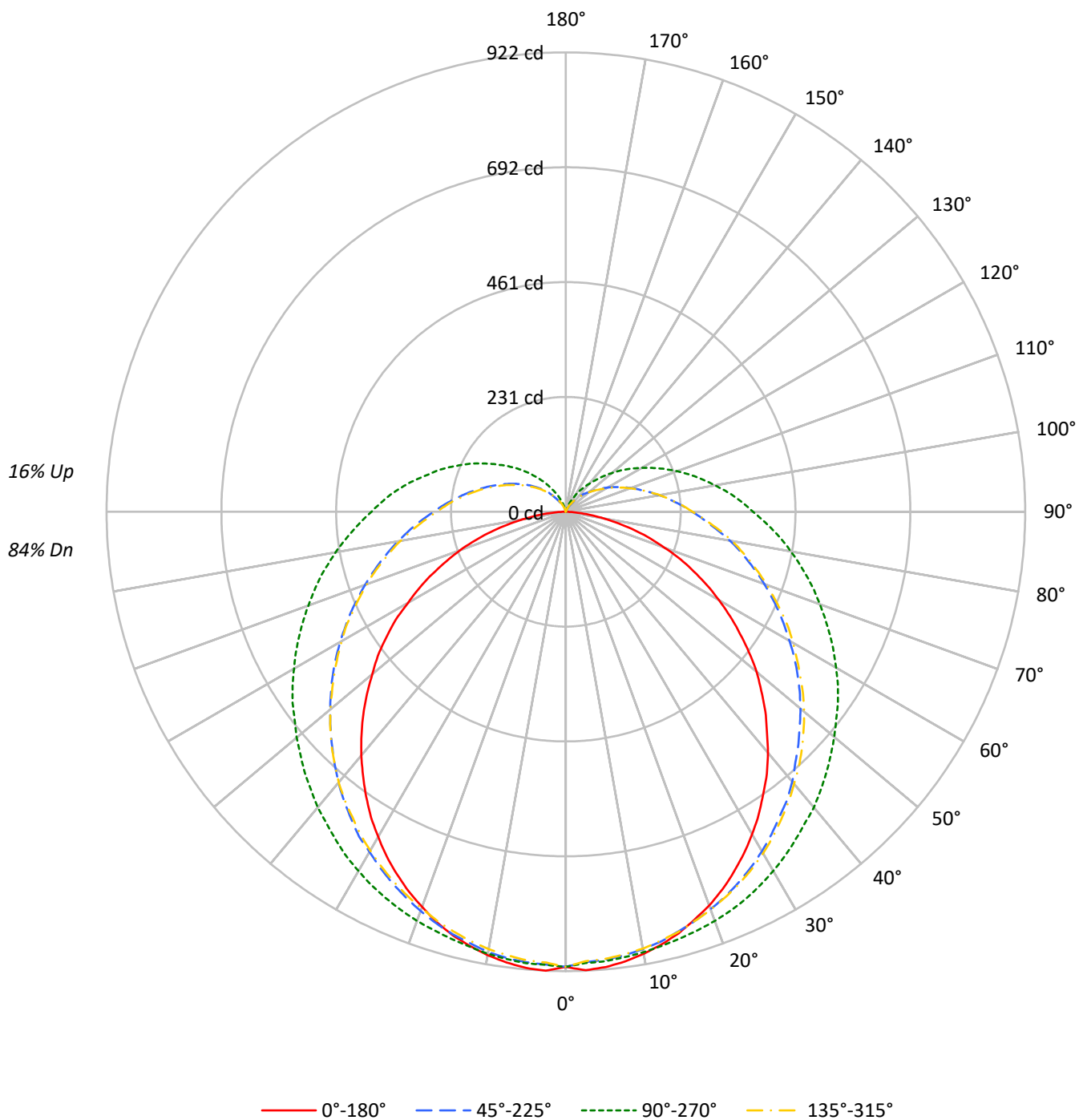
Lumens per Lamp: N/A
Luminaire Lumens: 3968.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.36 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

Input Watts (W): 39
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	115	115	115	115	111	111	111	111	102	102	102	94	94	94	87	87	87	84		
1	102	96	91	86	98	92	87	83	85	81	77	78	75	72	72	70	67	64		
2	92	82	74	68	87	79	72	66	73	67	62	67	62	58	62	58	54	51		
3	83	71	62	55	79	69	60	54	63	56	51	58	52	48	54	49	45	42		
4	76	63	53	46	72	60	52	45	56	48	42	51	45	40	47	42	38	35		
5	69	56	46	39	66	54	45	38	50	42	36	46	39	34	42	37	33	30		
6	64	50	41	34	61	48	39	33	45	37	31	41	35	30	38	33	28	26		
7	59	45	36	30	56	43	35	29	40	33	28	38	31	26	35	29	25	23		
8	55	41	32	26	52	40	31	26	37	30	24	34	28	23	32	26	22	20		
9	51	37	29	23	49	36	28	23	34	27	22	32	25	21	30	24	20	18		
10	48	34	26	21	46	33	26	21	31	24	20	29	23	19	27	22	18	16		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	7380	7380	7380	7380
5°	7420	7113	7435	7143
10°	7351	6910	7375	6933
15°	7265	6737	7298	6745
20°	7152	6611	7176	6611
25°	7010	6499	7053	6492
30°	6852	6384	6906	6384
35°	6669	6277	6743	6285
40°	6486	6214	6565	6214
45°	6278	6148	6374	6156
50°	6060	6109	6143	6125
55°	5756	6115	5938	6141
60°	5435	6133	5613	6171
65°	5075	6195	5301	6257
70°	4569	6309	4926	6398
75°	3987	6515	4365	6640
80°	3083	6821	3502	6979
85°	1845	7312	2302	7513

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 270°

Vertical Angle: 90°

Luminance: 8400 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.5	2.2
10°-20°	248.7	6.3
20°-30°	381.2	9.6
30°-40°	470.3	11.9
40°-50°	510.3	12.9
50°-60°	502.9	12.7
60°-70°	454.7	11.5
70°-80°	378.8	9.5
80°-90°	293.4	7.4
90°-100°	222.5	5.6
100°-110°	164.7	4.1
110°-120°	114.5	2.9
120°-130°	73.1	1.8
130°-140°	41.0	1.0
140°-150°	18.7	0.5
150°-160°	5.8	0.1
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	716.4	18.1
0°-40°	1186.7	29.9
0°-60°	2200.0	55.4
0°-90°	3326.9	83.8
90°-120°	501.7	12.6
90°-150°	634.6	16.0
90°-180°	641.0	16.2
0°-180°	3968.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	913	913	913	913	913	
5°	917	906	919	910	917	87
15°	876	886	880	887	876	247
25°	798	856	802	856	798	367
35°	691	804	698	804	691	433
45°	566	740	575	741	566	436
55°	427	667	440	670	427	382
65°	283	585	296	591	283	281
75°	143	501	156	511	143	151
85°	27	417	34	429	27	33
90°	1	376	2	390	1	1
95°	1	341	1	357	1	1
105°	1	271	1	287	1	1
115°	1	206	1	224	1	1
125°	1	148	1	165	1	1
135°	1	96	1	114	1	1
145°	1	56	1	68	1	1
155°	1	23	1	32	1	0
165°	1	4	1	6	1	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3
2.5°	921.0	921.0	920.1	918.1	919.1	922.0	920.1	915.2	912.4	904.6	906.6
5°	917.2	917.2	916.2	914.3	915.2	919.1	917.2	913.3	909.5	902.7	905.6
7.5°	910.4	910.4	909.5	907.5	909.5	913.3	911.4	907.5	904.6	897.9	900.8
10°	900.8	901.8	900.8	897.9	901.8	905.6	904.6	899.8	896.9	891.2	894.0
12.5°	889.2	890.2	889.2	888.3	890.2	896.0	894.0	890.2	888.3	883.5	886.3
15°	875.7	876.7	874.8	874.8	876.7	882.5	882.5	878.6	876.7	871.9	877.7
17.5°	858.4	859.4	858.4	858.4	860.3	866.1	867.1	865.1	863.2	861.3	867.1
20°	841.1	840.1	840.1	839.1	843.0	851.7	850.7	850.7	848.8	848.8	855.5
22.5°	820.8	820.8	819.9	819.9	824.7	832.4	832.4	834.3	832.4	836.2	842.0
25°	797.7	798.7	797.7	799.6	803.5	812.2	813.1	816.0	817.0	820.8	827.6
27.5°	773.6	774.6	773.6	775.5	782.3	789.0	793.9	797.7	798.7	804.5	813.1
30°	747.6	747.6	748.6	750.5	758.2	768.8	772.7	777.5	777.5	787.1	795.8
32.5°	720.6	720.6	720.6	724.5	733.2	745.7	750.5	756.3	758.2	767.8	777.5
35°	690.8	691.7	691.7	694.6	706.2	718.7	725.5	732.2	736.0	747.6	757.2
37.5°	662.8	664.8	661.9	665.7	682.1	692.7	700.4	707.1	713.9	729.3	737.0
40°	631.0	633.0	632.0	639.7	653.2	666.7	675.4	682.1	691.7	707.1	715.8
42.5°	597.3	599.2	601.2	609.8	624.3	637.8	648.4	657.0	668.6	682.1	696.5
45°	566.5	566.5	569.4	580.0	595.4	609.8	622.4	632.0	645.5	659.9	674.4
47.5°	531.8	532.8	536.6	549.1	565.5	582.9	594.4	607.0	621.4	636.8	653.2
50°	500.0	500.0	505.8	519.3	534.7	554.0	566.5	580.9	596.4	614.7	631.0
52.5°	463.4	465.3	474.0	486.5	506.8	524.1	538.5	554.0	572.3	591.5	609.8
55°	426.8	430.6	437.4	454.7	475.9	492.3	509.6	528.9	546.3	567.5	588.6
57.5°	391.1	394.0	404.6	422.0	444.1	464.4	482.7	501.0	522.2	543.4	565.5
60°	354.5	358.4	370.9	388.3	412.3	433.5	454.7	474.0	496.2	518.3	541.4
62.5°	319.9	322.7	337.2	357.4	381.5	404.6	425.8	449.0	473.0	494.2	517.4
65°	283.2	288.1	304.4	322.7	350.7	373.8	397.9	422.9	448.0	471.1	493.3
67.5°	249.5	252.4	269.8	291.0	318.9	344.9	370.0	396.9	422.9	447.0	469.2
70°	210.0	219.7	237.0	259.2	289.0	316.0	343.0	370.9	398.9	423.9	445.1
72.5°	177.3	185.0	204.2	228.3	257.2	289.0	317.0	346.8	374.8	400.8	422.9
75°	142.6	150.3	172.5	199.4	229.3	263.0	291.9	322.7	351.6	377.7	400.8
77.5°	108.9	118.5	142.6	170.5	203.3	238.0	267.8	298.7	328.5	356.5	379.6
80°	78.0	88.6	114.6	146.4	178.2	212.9	245.7	276.5	306.4	334.3	358.4
82.5°	50.1	61.7	89.6	121.4	155.1	189.8	223.5	254.3	284.2	312.1	337.2
85°	27.0	39.5	68.4	100.2	133.9	168.6	202.3	235.1	264.0	290.0	317.0
87.5°	7.7	23.1	51.1	82.9	117.5	149.3	182.1	214.8	243.7	271.7	295.8
90°	1.0	13.5	38.5	68.4	102.1	133.0	165.7	196.5	225.4	253.4	277.5
92.5°	1.0	8.7	29.9	56.8	87.7	119.5	152.2	182.1	209.1	237.0	261.1
95°	1.0	6.7	24.1	48.2	77.1	106.9	137.8	166.7	194.6	220.6	244.7
97.5°	1.0	4.8	19.3	41.4	67.4	95.4	125.2	154.1	181.1	206.2	228.3
100°	1.0	3.9	15.4	35.6	58.8	85.7	112.7	140.7	166.7	190.8	213.9
102.5°	1.0	2.9	13.5	29.9	52.0	76.1	102.1	128.1	153.2	176.3	199.4
105°	1.0	2.9	11.6	26.0	46.2	68.4	92.5	117.5	140.7	162.8	184.0
107.5°	1.0	1.9	9.6	22.2	40.5	61.7	83.8	107.9	129.1	150.3	170.5
110°	1.0	1.9	7.7	20.2	35.6	54.9	76.1	98.3	118.5	138.7	158.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.0	1.9	6.7	17.3	30.8	49.1	68.4	88.6	107.9	128.1	145.5
115°	1.0	1.9	5.8	15.4	28.9	42.4	61.7	80.0	99.2	117.5	133.9
117.5°	1.0	1.9	4.8	12.5	25.0	38.5	54.0	72.3	89.6	106.9	122.4
120°	1.0	1.9	3.9	11.6	22.2	34.7	48.2	64.5	80.9	97.3	113.7
122.5°	1.0	1.0	3.9	9.6	19.3	30.8	44.3	56.8	72.3	87.7	102.1
125°	1.0	1.0	3.9	8.7	16.4	27.9	39.5	51.1	64.5	78.0	90.6
127.5°	1.0	1.0	2.9	6.7	14.5	24.1	34.7	47.2	56.8	69.4	81.9
130°	1.0	1.0	2.9	5.8	12.5	20.2	30.8	41.4	53.0	61.7	72.3
132.5°	1.0	1.0	2.9	4.8	9.6	16.4	26.0	35.6	46.2	55.9	64.5
135°	1.0	1.0	1.9	3.9	7.7	13.5	21.2	29.9	40.5	50.1	58.8
137.5°	1.0	1.0	1.9	3.9	5.8	11.6	16.4	24.1	33.7	42.4	51.1
140°	1.0	1.0	1.9	2.9	4.8	8.7	13.5	19.3	27.0	34.7	44.3
142.5°	1.0	1.0	1.0	2.9	3.9	6.7	10.6	15.4	21.2	27.9	35.6
145°	1.0	1.0	1.0	2.9	3.9	4.8	8.7	12.5	16.4	21.2	27.9
147.5°	1.0	1.0	1.0	1.9	2.9	3.9	6.7	9.6	12.5	16.4	20.2
150°	1.0	1.0	1.0	1.9	2.9	3.9	4.8	6.7	9.6	13.5	16.4
152.5°	1.0	1.0	1.0	1.9	1.9	2.9	3.9	4.8	6.7	9.6	11.6
155°	1.0	1.0	1.0	1.0	1.9	2.9	3.9	3.9	4.8	6.7	8.7
157.5°	1.0	1.0	1.0	1.0	1.9	1.9	2.9	2.9	3.9	3.9	5.8
160°	1.0	1.0	1.0	1.0	1.0	1.9	1.9	2.9	2.9	2.9	2.9
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9	1.9	2.9	2.9
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9	1.9
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3
2.5°	906.6	907.5	910.4	910.4	908.5	908.5	907.5	906.6	907.5	909.5	909.5
5°	904.6	905.6	908.5	909.5	907.5	906.6	906.6	905.6	906.6	908.5	908.5
7.5°	900.8	901.8	904.6	905.6	903.7	903.7	902.7	901.8	903.7	904.6	904.6
10°	895.0	896.0	899.8	900.8	899.8	898.9	898.9	897.9	898.9	900.8	900.8
12.5°	887.3	889.2	894.0	894.0	894.0	893.1	893.1	892.1	893.1	895.0	894.0
15°	878.6	882.5	886.3	888.3	888.3	888.3	887.3	886.3	888.3	889.2	888.3
17.5°	869.0	873.8	879.6	881.5	881.5	882.5	881.5	880.6	882.5	882.5	881.5
20°	859.4	864.2	870.0	871.9	873.8	874.8	874.8	873.8	874.8	875.7	874.8
22.5°	846.8	852.6	859.4	862.3	864.2	866.1	866.1	866.1	867.1	868.0	866.1
25°	833.4	840.1	847.8	850.7	854.5	855.5	856.5	856.5	857.4	858.4	855.5
27.5°	818.9	826.6	834.3	839.1	842.0	844.0	844.0	844.9	845.9	846.8	844.0
30°	801.6	813.1	819.9	823.7	827.6	830.5	831.4	832.4	833.4	834.3	831.4
32.5°	786.1	795.8	804.5	809.3	814.1	817.9	818.9	818.9	820.8	820.8	817.9
35°	767.8	779.4	788.1	792.9	798.7	801.6	803.5	803.5	805.4	805.4	802.5
37.5°	749.5	761.1	770.7	776.5	783.3	787.1	788.1	788.1	790.0	790.0	786.1
40°	730.3	742.8	753.4	760.1	765.9	770.7	771.7	774.6	774.6	773.6	769.8
42.5°	711.0	722.6	734.1	741.8	749.5	754.4	756.3	757.2	757.2	756.3	753.4
45°	689.8	703.3	713.9	723.5	731.2	736.0	738.9	739.9	739.9	738.0	735.1
47.5°	669.6	683.1	693.7	704.3	712.0	717.7	720.6	721.6	720.6	719.7	716.8
50°	648.4	663.8	674.4	685.0	692.7	697.5	702.3	703.3	702.3	701.4	695.6
52.5°	626.2	642.6	654.2	664.8	673.4	679.2	683.1	684.0	684.0	682.1	678.2
55°	604.1	618.5	633.0	644.5	654.2	659.9	664.8	666.7	664.8	662.8	658.0
57.5°	583.8	597.3	611.8	624.3	633.9	641.6	645.5	647.4	645.5	642.6	637.8
60°	559.7	574.2	590.6	602.1	612.7	620.4	622.4	626.2	624.3	621.4	616.6
62.5°	536.6	554.0	568.4	582.9	591.5	600.2	604.1	606.0	604.1	601.2	596.4
65°	512.5	531.8	546.3	560.7	570.3	579.0	583.8	584.8	582.9	580.0	575.2
67.5°	490.4	508.7	524.1	539.5	548.2	556.9	561.7	563.6	561.7	557.8	553.0
70°	468.2	486.5	504.8	516.4	527.0	536.6	539.5	542.4	540.5	536.6	530.8
72.5°	446.1	465.3	483.6	495.2	506.8	515.4	519.3	522.2	520.2	516.4	509.6
75°	422.9	443.2	461.5	474.0	485.6	494.2	498.1	501.0	499.0	495.2	487.5
77.5°	401.7	422.0	439.3	452.8	464.4	472.1	478.8	479.8	477.9	474.0	466.3
80°	379.6	399.8	418.1	431.6	443.2	450.9	455.7	458.6	456.7	452.8	445.1
82.5°	360.3	378.6	396.9	410.4	422.0	431.6	435.5	438.4	437.4	431.6	425.8
85°	339.1	360.3	374.8	389.2	400.8	410.4	413.3	417.2	416.2	411.4	403.7
87.5°	317.9	339.1	356.5	370.9	381.5	389.2	394.0	396.0	395.0	390.2	381.5
90°	300.6	319.9	337.2	352.6	361.3	370.0	374.8	375.7	375.7	370.0	363.2
92.5°	284.2	302.5	319.9	334.3	344.9	352.6	356.5	358.4	357.4	352.6	344.9
95°	265.9	286.1	302.5	317.0	327.6	335.3	339.1	341.0	340.1	335.3	327.6
97.5°	250.5	268.8	285.2	298.7	309.3	317.0	320.8	322.7	322.7	317.9	310.2
100°	235.1	253.4	268.8	282.3	291.9	299.6	303.5	304.4	303.5	299.6	291.9
102.5°	219.7	237.0	252.4	264.9	275.5	282.3	286.1	287.1	287.1	282.3	274.6
105°	204.2	221.6	236.0	249.5	258.2	264.9	267.8	270.7	269.8	265.9	258.2
107.5°	189.8	207.1	220.6	233.1	241.8	248.6	251.5	254.3	253.4	249.5	241.8
110°	176.3	192.7	205.2	217.7	225.4	232.2	237.0	238.0	236.0	232.2	225.4

TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	163.8	178.2	190.8	202.3	211.0	215.8	219.7	221.6	219.7	215.8	211.0
115°	150.3	164.7	177.3	187.9	195.6	201.4	204.2	206.2	204.2	200.4	195.6
117.5°	137.8	151.3	163.8	174.4	181.1	185.9	188.8	190.8	188.8	185.9	181.1
120°	127.2	138.7	150.3	159.9	167.6	171.5	174.4	176.3	175.3	171.5	166.7
122.5°	114.6	127.2	137.8	147.4	154.1	158.0	159.9	161.9	160.9	158.0	153.2
125°	104.0	114.6	125.2	133.9	140.7	144.5	146.4	148.4	147.4	144.5	138.7
127.5°	92.5	104.0	112.7	121.4	126.2	132.0	133.0	134.9	133.9	131.0	126.2
130°	83.8	92.5	101.2	108.9	114.6	118.5	120.4	121.4	119.5	117.5	112.7
132.5°	73.2	82.9	90.6	97.3	101.2	105.0	106.9	107.9	107.9	105.0	101.2
135°	65.5	72.3	79.0	85.7	89.6	93.5	95.4	96.3	95.4	93.5	89.6
137.5°	58.8	64.5	69.4	75.1	80.0	81.9	83.8	83.8	82.9	81.9	79.0
140°	51.1	57.8	62.6	66.5	70.3	71.3	73.2	73.2	72.3	71.3	69.4
142.5°	43.4	49.1	54.0	58.8	61.7	63.6	64.5	65.5	64.5	63.6	60.7
145°	34.7	41.4	46.2	49.1	53.0	54.0	54.9	55.9	54.9	54.0	51.1
147.5°	27.0	32.8	37.6	41.4	44.3	45.3	46.2	47.2	46.2	44.3	43.4
150°	19.3	24.1	29.9	33.7	35.6	37.6	37.6	37.6	38.5	36.6	34.7
152.5°	15.4	17.3	21.2	25.0	27.9	28.9	29.9	29.9	28.9	28.9	27.0
155°	10.6	12.5	15.4	18.3	21.2	22.2	23.1	23.1	22.2	22.2	21.2
157.5°	6.7	8.7	10.6	12.5	15.4	16.4	17.3	17.3	17.3	16.4	15.4
160°	3.9	4.8	5.8	7.7	9.6	10.6	11.6	11.6	11.6	11.6	10.6
162.5°	2.9	2.9	2.9	3.9	4.8	5.8	6.7	6.7	6.7	6.7	5.8
165°	1.9	1.9	1.9	1.9	1.9	2.9	3.9	3.9	3.9	3.9	3.9
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3
2.5°	908.5	908.5	909.5	907.5	901.8	902.7	902.7	906.6	908.5	909.5	914.3
5°	906.6	906.6	908.5	905.6	900.8	900.8	900.8	904.6	905.6	907.5	911.4
7.5°	903.7	903.7	904.6	901.8	896.0	896.0	895.0	898.9	900.8	901.8	905.6
10°	898.9	898.9	899.8	896.9	890.2	890.2	889.2	892.1	893.1	895.0	897.9
12.5°	892.1	892.1	892.1	889.2	882.5	881.5	880.6	883.5	883.5	884.4	887.3
15°	886.3	884.4	884.4	881.5	874.8	872.9	870.9	871.9	873.8	872.9	874.8
17.5°	879.6	877.7	875.7	872.9	864.2	861.3	859.4	860.3	859.4	858.4	860.3
20°	871.9	869.0	868.0	863.2	854.5	849.7	845.9	844.0	844.9	842.0	843.0
22.5°	863.2	859.4	857.4	851.7	843.0	837.2	832.4	828.5	827.6	823.7	824.7
25°	852.6	847.8	844.9	840.1	830.5	823.7	817.9	812.2	809.3	804.5	803.5
27.5°	840.1	835.3	831.4	826.6	817.0	808.3	801.6	793.9	790.0	784.2	781.3
30°	827.6	821.8	816.0	812.2	801.6	791.9	781.3	774.6	768.8	762.1	757.2
32.5°	812.2	806.4	800.6	794.8	785.2	773.6	765.0	754.4	747.6	739.9	734.1
35°	796.7	789.0	783.3	775.5	766.9	753.4	742.8	732.2	723.5	714.9	708.1
37.5°	779.4	773.6	765.0	758.2	747.6	734.1	722.6	709.1	701.4	689.8	681.1
40°	763.0	756.3	747.6	738.9	728.3	712.9	700.4	685.0	676.3	662.8	654.2
42.5°	746.6	737.0	728.3	718.7	707.1	692.7	677.3	661.9	650.3	637.8	625.3
45°	728.3	717.7	707.1	696.5	685.0	670.5	654.2	637.8	623.3	611.8	596.4
47.5°	709.1	698.5	686.0	674.4	661.9	647.4	630.1	612.7	597.3	583.8	567.5
50°	689.8	679.2	665.7	653.2	638.7	624.3	606.0	585.8	569.4	552.0	537.6
52.5°	669.6	659.0	646.5	630.1	614.7	600.2	580.9	559.7	541.4	527.0	508.7
55°	649.3	638.7	624.3	607.9	592.5	574.2	555.9	534.7	514.5	497.1	478.8
57.5°	628.1	618.5	602.1	588.6	569.4	550.1	530.8	510.6	488.5	468.2	447.0
60°	607.0	596.4	580.9	564.6	545.3	526.0	505.8	483.6	460.5	438.4	419.1
62.5°	587.7	574.2	559.7	542.4	522.2	503.9	480.7	456.7	433.5	410.4	387.3
65°	565.5	551.1	537.6	520.2	499.0	477.9	454.7	430.6	405.6	380.5	357.4
67.5°	543.4	528.9	514.5	497.1	475.0	452.8	428.7	404.6	376.7	352.6	325.6
70°	521.2	509.6	491.3	473.0	452.8	428.7	404.6	378.6	349.7	323.7	295.8
72.5°	499.0	487.5	469.2	449.9	430.6	405.6	379.6	353.6	326.6	296.7	266.9
75°	477.9	463.4	447.0	428.7	408.5	382.5	356.5	329.5	297.7	269.8	238.9
77.5°	457.6	444.1	427.8	407.5	385.4	360.3	333.3	305.4	273.6	243.7	210.0
80°	435.5	422.0	405.6	385.4	363.2	339.1	310.2	281.3	250.5	217.7	183.0
82.5°	414.3	401.7	383.4	365.1	341.0	317.0	288.1	259.2	226.4	194.6	160.9
85°	392.1	379.6	362.2	343.0	319.9	293.8	266.9	238.0	205.2	172.5	138.7
87.5°	372.8	358.4	341.0	321.8	298.7	273.6	247.6	216.8	185.0	153.2	118.5
90°	352.6	339.1	321.8	302.5	279.4	254.3	227.4	198.5	167.6	134.9	102.1
92.5°	335.3	320.8	304.4	285.2	262.0	238.0	211.0	182.1	152.2	120.4	88.6
95°	317.9	303.5	288.1	268.8	245.7	221.6	194.6	166.7	137.8	106.9	77.1
97.5°	298.7	286.1	270.7	252.4	229.3	206.2	180.2	153.2	125.2	95.4	67.4
100°	283.2	268.8	254.3	235.1	213.9	191.7	165.7	139.7	112.7	84.8	58.8
102.5°	265.9	252.4	238.0	219.7	198.5	176.3	152.2	127.2	102.1	76.1	51.1
105°	249.5	237.0	221.6	204.2	184.0	162.8	139.7	116.6	92.5	67.4	45.3
107.5°	233.1	220.6	206.2	189.8	170.5	149.3	128.1	105.0	82.9	60.7	40.5
110°	216.8	205.2	191.7	175.3	157.0	137.8	117.5	96.3	74.2	54.0	35.6

TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	202.3	190.8	177.3	161.9	144.5	126.2	106.9	86.7	66.5	48.2	30.8
115°	187.9	177.3	163.8	150.3	133.0	115.6	97.3	78.0	59.7	43.4	27.0
117.5°	173.4	162.8	150.3	136.8	121.4	105.0	87.7	69.4	54.0	38.5	24.1
120°	159.0	149.3	137.8	125.2	111.8	95.4	78.0	62.6	48.2	33.7	21.2
122.5°	145.5	136.8	126.2	114.6	100.2	84.8	70.3	56.8	43.4	29.9	17.3
125°	133.0	124.3	114.6	103.1	89.6	76.1	63.6	51.1	37.6	26.0	14.5
127.5°	120.4	111.8	102.1	91.5	80.9	68.4	56.8	45.3	33.7	23.1	12.5
130°	107.9	100.2	91.5	82.9	72.3	60.7	51.1	39.5	28.9	18.3	10.6
132.5°	95.4	89.6	81.9	73.2	63.6	54.9	44.3	34.7	25.0	16.4	9.6
135°	84.8	79.0	72.3	64.5	56.8	48.2	38.5	29.9	21.2	13.5	7.7
137.5°	75.1	70.3	63.6	56.8	50.1	41.4	33.7	25.0	17.3	11.6	5.8
140°	66.5	61.7	55.9	49.1	43.4	35.6	27.9	20.2	15.4	9.6	4.8
142.5°	57.8	53.0	48.2	42.4	36.6	29.9	23.1	17.3	12.5	7.7	4.8
145°	49.1	45.3	40.5	35.6	29.9	24.1	19.3	14.5	9.6	5.8	3.9
147.5°	40.5	37.6	32.8	28.9	24.1	19.3	15.4	11.6	7.7	4.8	2.9
150°	32.8	29.9	26.0	22.2	19.3	15.4	12.5	8.7	5.8	4.8	2.9
152.5°	25.0	23.1	20.2	18.3	15.4	11.6	8.7	6.7	4.8	3.9	1.9
155°	20.2	18.3	16.4	13.5	11.6	8.7	6.7	4.8	3.9	2.9	1.9
157.5°	14.5	13.5	11.6	9.6	7.7	5.8	4.8	4.8	2.9	1.9	1.0
160°	9.6	8.7	7.7	5.8	4.8	4.8	3.9	2.9	1.9	1.9	1.0
162.5°	5.8	4.8	4.8	4.8	3.9	3.9	2.9	1.9	1.9	1.0	1.0
165°	3.9	3.9	3.9	2.9	2.9	2.9	1.9	1.0	1.0	1.0	1.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3
2.5°	914.3	911.4	915.2	922.0	923.0	922.0	920.1	923.0	926.8	925.8	919.1
5°	912.4	908.5	912.4	919.1	919.1	918.1	917.2	920.1	923.9	923.0	917.2
7.5°	906.6	902.7	906.6	912.4	913.3	911.4	911.4	914.3	918.1	917.2	912.4
10°	898.9	895.0	896.9	903.7	905.6	903.7	903.7	906.6	911.4	910.4	904.6
12.5°	887.3	884.4	886.3	892.1	894.0	893.1	892.1	896.0	900.8	900.8	895.0
15°	874.8	870.9	872.9	879.6	880.6	878.6	879.6	882.5	888.3	888.3	883.5
17.5°	860.3	855.5	858.4	863.2	864.2	864.2	864.2	868.0	874.8	873.8	870.0
20°	844.0	837.2	839.1	844.0	845.9	845.9	845.9	852.6	857.4	857.4	853.6
22.5°	824.7	819.9	819.9	824.7	827.6	826.6	826.6	832.4	839.1	838.2	838.2
25°	802.5	798.7	796.7	802.5	803.5	804.5	806.4	812.2	819.9	819.9	820.8
27.5°	779.4	775.5	774.6	779.4	780.4	781.3	783.3	790.0	797.7	798.7	800.6
30°	757.2	751.5	749.5	753.4	755.3	756.3	756.3	766.9	773.6	776.5	780.4
32.5°	731.2	725.5	720.6	727.4	728.3	730.3	731.2	741.8	749.5	754.4	760.1
35°	705.2	695.6	693.7	698.5	700.4	701.4	703.3	714.9	725.5	729.3	737.0
37.5°	676.3	669.6	663.8	668.6	670.5	671.5	677.3	687.9	698.5	704.3	712.0
40°	649.3	640.7	635.9	638.7	640.7	641.6	648.4	659.9	672.5	679.2	688.8
42.5°	619.5	607.9	604.1	607.0	607.9	610.8	616.6	632.0	644.5	654.2	661.9
45°	589.6	580.9	572.3	575.2	576.1	578.0	586.7	603.1	616.6	628.1	636.8
47.5°	558.8	548.2	539.5	541.4	545.3	546.3	555.9	575.2	587.7	600.2	611.8
50°	528.0	513.5	506.8	506.8	508.7	513.5	526.0	545.3	558.8	573.2	585.8
52.5°	496.2	482.7	475.0	475.9	477.9	483.6	495.2	514.5	529.9	545.3	560.7
55°	464.4	449.9	442.2	440.3	442.2	449.9	463.4	483.6	499.0	517.4	533.7
57.5°	432.6	415.2	408.5	405.6	407.5	417.2	430.6	451.8	471.1	488.5	507.7
60°	397.9	384.4	372.8	366.1	370.9	383.4	397.9	420.0	440.3	459.5	480.7
62.5°	368.0	350.7	338.2	331.4	336.2	346.8	367.1	388.3	410.4	432.6	453.8
65°	334.3	317.0	302.5	295.8	300.6	313.1	333.3	356.5	380.5	402.7	427.8
67.5°	301.5	283.2	265.9	259.2	264.9	278.4	300.6	326.6	352.6	375.7	402.7
70°	269.8	249.5	231.2	226.4	230.3	248.6	269.8	295.8	322.7	349.7	377.7
72.5°	240.9	215.8	196.5	190.8	195.6	215.8	239.9	266.9	295.8	324.7	354.5
75°	207.1	184.0	162.8	156.1	161.9	180.2	210.0	238.9	269.8	300.6	328.5
77.5°	180.2	153.2	131.0	120.4	130.1	153.2	182.1	212.9	244.7	276.5	308.3
80°	152.2	124.3	100.2	88.6	99.2	124.3	153.2	186.9	222.5	254.3	283.2
82.5°	127.2	97.3	72.3	59.7	71.3	99.2	131.0	164.7	199.4	231.2	264.9
85°	104.0	73.2	47.2	33.7	50.1	75.1	108.9	143.5	179.2	212.0	244.7
87.5°	84.8	54.9	28.9	14.5	30.8	58.8	90.6	125.2	160.9	193.6	224.5
90°	69.4	39.5	15.4	1.9	18.3	44.3	75.1	108.9	142.6	176.3	207.1
92.5°	56.8	29.9	8.7	1.0	11.6	35.6	64.5	96.3	129.1	161.9	191.7
95°	47.2	23.1	5.8	1.0	8.7	27.9	54.9	85.7	116.6	148.4	178.2
97.5°	40.5	19.3	4.8	1.0	6.7	24.1	47.2	76.1	106.0	135.8	164.7
100°	34.7	15.4	3.9	1.0	5.8	20.2	41.4	67.4	95.4	124.3	152.2
102.5°	29.9	12.5	2.9	1.0	4.8	17.3	36.6	60.7	85.7	113.7	140.7
105°	26.0	10.6	2.9	1.0	3.9	15.4	32.8	54.0	79.0	104.0	130.1
107.5°	22.2	8.7	1.9	1.0	2.9	12.5	28.9	49.1	71.3	95.4	119.5
110°	19.3	7.7	1.9	1.0	2.9	11.6	25.0	44.3	64.5	86.7	109.8

TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	16.4	5.8	1.9	1.0	1.9	9.6	22.2	39.5	58.8	79.0	101.2
115°	14.5	4.8	1.0	1.0	1.9	8.7	20.2	35.6	53.0	72.3	92.5
117.5°	11.6	3.9	1.0	1.0	1.0	6.7	17.3	31.8	48.2	66.5	84.8
120°	9.6	3.9	1.0	1.0	1.0	5.8	15.4	27.9	43.4	59.7	77.1
122.5°	8.7	2.9	1.0	1.0	1.0	4.8	13.5	25.0	38.5	54.0	70.3
125°	7.7	2.9	1.0	1.0	1.0	3.9	11.6	22.2	34.7	48.2	63.6
127.5°	5.8	2.9	1.0	1.0	1.0	2.9	10.6	19.3	30.8	43.4	56.8
130°	4.8	1.9	1.0	1.0	1.0	2.9	8.7	17.3	27.0	38.5	51.1
132.5°	3.9	1.9	1.0	1.0	1.0	1.9	6.7	13.5	23.1	33.7	45.3
135°	3.9	1.9	1.0	1.0	1.0	1.9	4.8	11.6	19.3	28.9	38.5
137.5°	3.9	1.0	1.0	1.0	1.0	1.9	3.9	8.7	15.4	23.1	31.8
140°	2.9	1.0	1.0	1.0	1.0	1.0	2.9	6.7	12.5	19.3	27.0
142.5°	2.9	1.0	1.0	1.0	1.0	1.0	2.9	4.8	9.6	15.4	21.2
145°	1.9	1.0	1.0	1.0	1.0	1.0	1.9	3.9	7.7	11.6	17.3
147.5°	1.9	1.0	1.0	1.0	1.0	1.0	1.9	2.9	5.8	9.6	13.5
150°	1.9	1.0	1.0	1.0	1.0	1.0	1.9	2.9	3.9	6.7	10.6
152.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9	2.9	4.8	6.7
155°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	3.9	4.8
157.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9	2.9	3.9
160°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9	2.9
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3
2.5°	916.2	909.5	911.4	910.4	912.4	915.2	915.2	914.3	914.3	912.4	910.4
5°	914.3	907.5	910.4	909.5	911.4	914.3	914.3	913.3	913.3	910.4	909.5
7.5°	908.5	903.7	905.6	905.6	907.5	910.4	910.4	909.5	909.5	906.6	905.6
10°	902.7	896.9	899.8	899.8	901.8	905.6	905.6	904.6	904.6	901.8	900.8
12.5°	893.1	887.3	892.1	893.1	895.0	898.9	897.9	897.9	897.9	895.0	894.0
15°	881.5	877.7	882.5	883.5	886.3	891.2	891.2	891.2	891.2	888.3	887.3
17.5°	869.0	866.1	870.9	872.9	876.7	881.5	881.5	882.5	883.5	881.5	880.6
20°	854.5	852.6	857.4	861.3	867.1	871.9	873.8	874.8	876.7	874.8	873.8
22.5°	838.2	838.2	844.9	848.8	855.5	860.3	863.2	866.1	868.0	866.1	865.1
25°	819.9	822.8	829.5	836.2	844.0	848.8	851.7	855.5	857.4	856.5	855.5
27.5°	802.5	806.4	815.0	821.8	828.5	836.2	839.1	844.0	845.9	845.9	844.9
30°	782.3	788.1	797.7	805.4	814.1	821.8	825.6	830.5	833.4	831.4	832.4
32.5°	763.0	772.7	780.4	789.0	798.7	806.4	811.2	817.0	819.9	818.9	819.9
35°	741.8	751.5	762.1	770.7	782.3	790.0	796.7	801.6	805.4	804.5	804.5
37.5°	718.7	731.2	741.8	753.4	764.0	772.7	779.4	785.2	789.0	789.0	789.0
40°	696.5	710.0	720.6	734.1	747.6	755.3	763.0	768.8	772.7	773.6	774.6
42.5°	672.5	686.9	699.4	713.9	727.4	737.0	745.7	752.4	756.3	758.2	757.2
45°	650.3	663.8	678.2	694.6	707.1	716.8	727.4	735.1	738.9	739.9	740.9
47.5°	625.3	640.7	657.0	673.4	686.0	698.5	708.1	715.8	719.7	722.6	722.6
50°	601.2	617.5	635.9	653.2	666.7	679.2	688.8	697.5	702.3	704.3	705.2
52.5°	579.0	594.4	613.7	631.0	644.5	657.0	669.6	679.2	684.0	686.0	686.0
55°	552.0	571.3	592.5	608.9	623.3	637.8	650.3	659.9	664.8	667.6	669.6
57.5°	527.0	547.2	569.4	586.7	604.1	617.5	629.1	641.6	645.5	649.3	650.3
60°	502.9	523.1	544.3	563.6	580.9	595.4	608.9	619.5	626.2	628.1	630.1
62.5°	477.9	499.0	521.2	540.5	558.8	576.1	588.6	598.3	606.0	608.9	610.8
65°	453.8	475.9	498.1	518.3	537.6	554.9	567.5	577.1	584.8	589.6	590.6
67.5°	427.8	451.8	475.0	496.2	515.4	533.7	546.3	555.9	563.6	569.4	570.3
70°	403.7	428.7	451.8	475.0	494.2	512.5	526.0	535.7	544.3	548.2	550.1
72.5°	380.5	406.6	430.6	453.8	473.0	491.3	505.8	515.4	524.1	528.9	529.9
75°	358.4	384.4	410.4	432.6	452.8	471.1	485.6	496.2	503.9	508.7	510.6
77.5°	336.2	363.2	389.2	411.4	432.6	450.9	463.4	475.9	483.6	489.4	489.4
80°	314.1	342.0	369.0	391.1	412.3	428.7	443.2	455.7	463.4	469.2	469.2
82.5°	294.8	321.8	347.8	370.0	391.1	409.5	423.9	435.5	444.1	448.0	449.0
85°	272.6	302.5	326.6	350.7	370.9	388.3	402.7	415.2	422.9	426.8	428.7
87.5°	254.3	283.2	309.3	330.5	350.7	368.0	384.4	395.0	402.7	407.5	409.5
90°	237.0	264.9	291.0	312.1	333.3	349.7	365.1	375.7	384.4	388.3	390.2
92.5°	221.6	249.5	274.6	295.8	316.0	334.3	348.8	359.4	367.1	370.9	373.8
95°	207.1	234.1	258.2	281.3	300.6	317.0	332.4	343.0	351.6	354.5	357.4
97.5°	192.7	218.7	242.8	264.9	285.2	300.6	315.0	325.6	332.4	337.2	340.1
100°	180.2	205.2	228.3	249.5	268.8	283.2	298.7	308.3	315.0	318.9	322.7
102.5°	166.7	191.7	213.9	234.1	254.3	267.8	282.3	291.9	297.7	304.4	304.4
105°	155.1	178.2	200.4	219.7	237.0	253.4	265.9	275.5	282.3	287.1	287.1
107.5°	142.6	165.7	186.9	207.1	223.5	238.9	250.5	259.2	266.9	269.8	272.6
110°	133.0	153.2	174.4	193.6	209.1	223.5	235.1	244.7	251.5	254.3	256.3

TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	121.4	142.6	161.9	180.2	195.6	209.1	220.6	228.3	235.1	238.9	239.9
115°	111.8	132.0	149.3	166.7	183.0	194.6	205.2	212.9	219.7	222.5	224.5
117.5°	103.1	121.4	138.7	153.2	168.6	181.1	191.7	198.5	204.2	208.1	210.0
120°	94.4	111.8	127.2	141.6	156.1	167.6	177.3	184.0	190.8	193.6	193.6
122.5°	85.7	102.1	116.6	130.1	143.5	154.1	164.7	170.5	176.3	179.2	179.2
125°	78.0	93.5	106.9	119.5	132.0	141.6	150.3	157.0	162.8	164.7	164.7
127.5°	70.3	84.8	97.3	108.9	119.5	129.1	137.8	144.5	149.3	151.3	151.3
130°	63.6	76.1	87.7	99.2	109.8	117.5	126.2	132.0	134.9	137.8	138.7
132.5°	56.8	68.4	79.0	88.6	99.2	106.9	113.7	119.5	122.4	125.2	126.2
135°	50.1	60.7	70.3	80.0	88.6	96.3	102.1	106.9	110.8	112.7	113.7
137.5°	42.4	54.0	62.6	70.3	80.0	85.7	92.5	95.4	99.2	101.2	101.2
140°	35.6	44.3	54.0	61.7	69.4	75.1	80.9	85.7	88.6	89.6	89.6
142.5°	28.9	36.6	44.3	54.0	60.7	65.5	71.3	75.1	77.1	78.0	79.0
145°	23.1	28.9	35.6	44.3	52.0	57.8	60.7	64.5	66.5	67.4	68.4
147.5°	17.3	23.1	28.9	34.7	42.4	48.2	51.1	54.9	56.8	57.8	57.8
150°	13.5	17.3	21.2	27.0	32.8	39.5	43.4	46.2	47.2	48.2	48.2
152.5°	9.6	13.5	16.4	20.2	24.1	29.9	35.6	37.6	38.5	39.5	39.5
155°	6.7	9.6	11.6	14.5	17.3	22.2	27.0	29.9	30.8	31.8	31.8
157.5°	4.8	6.7	7.7	10.6	12.5	14.5	18.3	23.1	24.1	24.1	24.1
160°	2.9	3.9	4.8	6.7	7.7	9.6	11.6	14.5	17.3	17.3	17.3
162.5°	1.9	2.9	2.9	3.9	3.9	5.8	6.7	7.7	10.6	11.6	11.6
165°	1.0	1.9	1.9	1.9	1.9	1.9	2.9	2.9	4.8	5.8	5.8
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3
2.5°	911.4	913.3	912.4	912.4	912.4	914.3	912.4	903.7	905.6	907.5	909.5
5°	910.4	911.4	911.4	910.4	910.4	912.4	910.4	901.8	903.7	905.6	906.6
7.5°	906.6	907.5	907.5	907.5	906.6	908.5	905.6	897.9	897.9	899.8	900.8
10°	901.8	903.7	902.7	901.8	901.8	901.8	899.8	891.2	891.2	892.1	893.1
12.5°	896.0	896.0	896.0	895.0	894.0	894.0	892.1	883.5	882.5	884.4	883.5
15°	888.3	890.2	888.3	887.3	885.4	885.4	882.5	873.8	871.9	872.9	871.9
17.5°	881.5	882.5	880.6	878.6	876.7	875.7	872.9	863.2	860.3	861.3	859.4
20°	874.8	874.8	872.9	870.9	868.0	865.1	861.3	851.7	846.8	846.8	843.0
22.5°	866.1	866.1	864.2	861.3	858.4	854.5	850.7	841.1	833.4	831.4	828.5
25°	856.5	855.5	854.5	851.7	845.9	842.0	838.2	827.6	818.9	815.0	810.2
27.5°	844.9	844.9	842.0	839.1	833.4	828.5	823.7	814.1	802.5	797.7	791.0
30°	832.4	832.4	829.5	825.6	819.9	814.1	808.3	796.7	785.2	778.4	770.7
32.5°	819.9	818.9	816.0	812.2	806.4	797.7	792.9	781.3	767.8	760.1	749.5
35°	804.5	803.5	800.6	795.8	788.1	781.3	773.6	763.0	747.6	738.0	726.4
37.5°	789.0	788.1	786.1	779.4	771.7	764.0	754.4	743.8	729.3	716.8	705.2
40°	773.6	772.7	768.8	764.0	754.4	744.7	735.1	724.5	709.1	694.6	682.1
42.5°	757.2	756.3	751.5	745.7	735.1	725.5	713.9	702.3	686.9	669.6	657.0
45°	740.9	738.9	734.1	727.4	715.8	705.2	693.7	680.2	664.8	648.4	632.0
47.5°	723.5	720.6	715.8	706.2	696.5	685.0	671.5	657.0	641.6	623.3	606.0
50°	704.3	702.3	696.5	687.9	676.3	664.8	649.3	634.9	616.6	599.2	578.0
52.5°	686.0	682.1	677.3	667.6	656.1	643.6	627.2	609.8	591.5	575.2	553.0
55°	666.7	664.8	658.0	650.3	635.9	621.4	606.0	587.7	567.5	548.2	527.0
57.5°	648.4	644.5	638.7	628.1	615.6	601.2	584.8	565.5	543.4	523.1	500.0
60°	630.1	624.3	617.5	607.9	594.4	579.0	561.7	541.4	519.3	497.1	473.0
62.5°	609.8	605.0	597.3	587.7	574.2	557.8	539.5	518.3	497.1	474.0	448.0
65°	589.6	584.8	577.1	567.5	554.0	535.7	516.4	495.2	471.1	449.0	421.0
67.5°	569.4	564.6	555.9	545.3	531.8	514.5	494.2	472.1	448.0	423.9	395.0
70°	549.1	543.4	535.7	524.1	510.6	492.3	472.1	449.0	424.9	398.9	370.0
72.5°	528.9	524.1	514.5	503.9	489.4	471.1	450.9	427.8	402.7	375.7	346.8
75°	508.7	502.9	496.2	483.6	468.2	450.9	429.7	406.6	379.6	353.6	323.7
77.5°	488.5	483.6	475.0	462.4	448.0	429.7	408.5	385.4	358.4	331.4	299.6
80°	468.2	462.4	455.7	444.1	427.8	409.5	387.3	364.2	337.2	309.3	277.5
82.5°	448.0	442.2	434.5	422.9	407.5	389.2	368.0	343.0	316.0	287.1	257.2
85°	427.8	422.9	414.3	402.7	386.3	368.0	346.8	324.7	295.8	266.9	237.0
87.5°	407.5	402.7	394.0	382.5	367.1	348.8	327.6	304.4	276.5	249.5	216.8
90°	388.3	384.4	375.7	364.2	348.8	330.5	311.2	286.1	259.2	232.2	201.4
92.5°	370.9	367.1	359.4	347.8	334.3	314.1	294.8	270.7	243.7	215.8	185.9
95°	355.5	350.7	343.0	332.4	316.0	298.7	279.4	255.3	229.3	201.4	172.5
97.5°	338.2	333.3	325.6	314.1	300.6	282.3	263.0	239.9	213.9	187.9	159.0
100°	320.8	316.0	307.3	297.7	284.2	265.9	247.6	224.5	200.4	175.3	147.4
102.5°	303.5	298.7	291.0	281.3	267.8	251.5	233.1	211.0	186.9	161.9	135.8
105°	287.1	282.3	274.6	264.9	252.4	236.0	216.8	197.5	174.4	150.3	125.2
107.5°	270.7	265.9	259.2	249.5	237.0	221.6	203.3	183.0	161.9	138.7	114.6
110°	254.3	250.5	242.8	234.1	221.6	206.2	189.8	170.5	149.3	128.1	105.0

TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	238.9	235.1	227.4	217.7	207.1	192.7	176.3	158.0	137.8	117.5	95.4
115°	223.5	218.7	212.0	203.3	192.7	179.2	163.8	147.4	127.2	107.9	87.7
117.5°	208.1	204.2	197.5	188.8	179.2	165.7	151.3	135.8	116.6	98.3	80.0
120°	192.7	189.8	183.0	175.3	165.7	153.2	139.7	124.3	106.9	89.6	72.3
122.5°	178.2	175.3	168.6	161.9	152.2	140.7	128.1	113.7	98.3	81.9	66.5
125°	164.7	160.9	155.1	148.4	139.7	129.1	116.6	103.1	88.6	74.2	59.7
127.5°	150.3	147.4	143.5	135.8	127.2	117.5	106.0	94.4	80.9	67.4	54.0
130°	138.7	134.9	130.1	124.3	116.6	106.9	96.3	84.8	73.2	60.7	47.2
132.5°	125.2	121.4	117.5	111.8	105.0	96.3	86.7	76.1	65.5	54.0	42.4
135°	112.7	109.8	106.0	100.2	93.5	86.7	77.1	67.4	57.8	47.2	37.6
137.5°	101.2	98.3	94.4	90.6	83.8	77.1	68.4	59.7	51.1	41.4	32.8
140°	89.6	87.7	83.8	80.0	74.2	67.4	59.7	52.0	44.3	35.6	27.9
142.5°	78.0	76.1	73.2	69.4	64.5	58.8	52.0	45.3	37.6	30.8	24.1
145°	67.4	66.5	63.6	59.7	55.9	50.1	44.3	38.5	31.8	26.0	19.3
147.5°	56.8	55.9	54.0	51.1	47.2	42.4	37.6	31.8	27.0	21.2	15.4
150°	47.2	46.2	45.3	41.4	39.5	34.7	30.8	26.0	22.2	16.4	12.5
152.5°	38.5	38.5	36.6	33.7	31.8	27.9	25.0	21.2	17.3	13.5	9.6
155°	30.8	29.9	28.9	27.0	25.0	22.2	19.3	16.4	13.5	9.6	6.7
157.5°	24.1	23.1	22.2	20.2	18.3	17.3	14.5	11.6	8.7	6.7	4.8
160°	17.3	16.4	15.4	14.5	13.5	11.6	9.6	7.7	5.8	3.9	2.9
162.5°	11.6	10.6	10.6	9.6	8.7	6.7	5.8	4.8	3.9	2.9	1.9
165°	5.8	5.8	4.8	4.8	3.9	2.9	2.9	2.9	1.9	1.9	1.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	913.3	913.3	913.3	913.3	913.3	913.3	913.3
2.5°	908.5	908.5	912.4	911.4	908.5	914.3	921.0
5°	905.6	905.6	908.5	908.5	905.6	911.4	917.2
7.5°	900.8	899.8	902.7	902.7	898.9	903.7	910.4
10°	892.1	891.2	894.0	894.0	890.2	895.0	900.8
12.5°	882.5	880.6	883.5	882.5	878.6	883.5	889.2
15°	870.0	869.0	870.9	869.0	865.1	870.0	875.7
17.5°	857.4	854.5	855.5	855.5	848.8	853.6	858.4
20°	841.1	837.2	838.2	837.2	832.4	835.3	841.1
22.5°	824.7	818.9	818.9	817.9	812.2	816.0	820.8
25°	804.5	797.7	797.7	796.7	790.0	792.9	797.7
27.5°	784.2	777.5	774.6	773.6	766.9	766.9	773.6
30°	763.0	753.4	751.5	748.6	741.8	741.8	747.6
32.5°	742.8	729.3	725.5	721.6	714.9	713.9	720.6
35°	715.8	705.2	698.5	694.6	686.9	685.0	690.8
37.5°	693.7	680.2	670.5	665.7	658.0	655.1	662.8
40°	669.6	655.1	642.6	639.7	628.1	624.3	631.0
42.5°	642.6	627.2	614.7	608.9	600.2	596.4	597.3
45°	615.6	599.2	585.8	578.0	569.4	562.6	566.5
47.5°	587.7	573.2	556.9	545.3	534.7	529.9	531.8
50°	559.7	542.4	527.0	514.5	501.9	496.2	500.0
52.5°	531.8	513.5	496.2	482.7	468.2	462.4	463.4
55°	504.8	485.6	465.3	450.9	437.4	428.7	426.8
57.5°	477.9	456.7	435.5	419.1	401.7	394.0	391.1
60°	449.0	426.8	404.6	385.4	367.1	358.4	354.5
62.5°	422.0	397.9	372.8	352.6	334.3	322.7	319.9
65°	396.0	368.0	343.0	319.9	299.6	287.1	283.2
67.5°	368.0	339.1	312.1	287.1	267.8	251.5	249.5
70°	342.0	311.2	281.3	255.3	234.1	217.7	210.0
72.5°	316.0	284.2	253.4	225.4	198.5	183.0	177.3
75°	291.0	258.2	225.4	196.5	166.7	148.4	142.6
77.5°	267.8	234.1	199.4	167.6	139.7	116.6	108.9
80°	245.7	211.0	174.4	141.6	111.8	86.7	78.0
82.5°	222.5	189.8	152.2	117.5	86.7	60.7	50.1
85°	202.3	169.6	132.0	97.3	66.5	38.5	27.0
87.5°	185.9	150.3	116.6	81.9	50.1	22.2	7.7
90°	169.6	134.9	101.2	67.4	37.6	12.5	1.0
92.5°	155.1	122.4	88.6	57.8	28.9	8.7	1.0
95°	141.6	109.8	78.0	48.2	23.1	5.8	1.0
97.5°	129.1	99.2	69.4	41.4	19.3	4.8	1.0
100°	118.5	89.6	61.7	36.6	16.4	3.9	1.0
102.5°	107.9	80.9	54.9	31.8	14.5	2.9	1.0
105°	99.2	73.2	49.1	28.9	12.5	2.9	1.0
107.5°	90.6	66.5	44.3	25.0	10.6	1.9	1.0
110°	81.9	60.7	39.5	22.2	9.6	1.9	1.0



TEST NUMBER: P1213790

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	75.1	54.9	35.6	20.2	7.7	1.9	1.0
115°	68.4	49.1	31.8	17.3	6.7	1.0	1.0
117.5°	61.7	44.3	27.9	15.4	5.8	1.0	1.0
120°	55.9	39.5	25.0	13.5	4.8	1.0	1.0
122.5°	50.1	35.6	22.2	11.6	3.9	1.0	1.0
125°	45.3	31.8	19.3	9.6	2.9	1.0	1.0
127.5°	40.5	27.9	17.3	8.7	2.9	1.0	1.0
130°	35.6	25.0	14.5	6.7	1.9	1.0	1.0
132.5°	31.8	21.2	12.5	5.8	1.9	1.0	1.0
135°	27.9	18.3	10.6	3.9	1.9	1.0	1.0
137.5°	24.1	15.4	8.7	2.9	1.0	1.0	1.0
140°	20.2	13.5	6.7	2.9	1.0	1.0	1.0
142.5°	17.3	10.6	4.8	1.9	1.0	1.0	1.0
145°	13.5	8.7	3.9	1.9	1.0	1.0	1.0
147.5°	10.6	6.7	2.9	1.9	1.0	1.0	1.0
150°	7.7	4.8	2.9	1.0	1.0	1.0	1.0
152.5°	5.8	3.9	1.9	1.0	1.0	1.0	1.0
155°	3.9	2.9	1.9	1.0	1.0	1.0	1.0
157.5°	2.9	1.9	1.0	1.0	1.0	1.0	1.0
160°	1.9	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)